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The English Oral Language Lessons were developed by the Foreign Language Innovative Curricula Studies (FLICS) of the University of Michigan. The lessons were designed for pre-school children of Mexican American migrant workers with an emphasis on the structure of English sentences rather than on vocabulary. The study was constructed to test the effectiveness of the FLICS lessons. Two experimental groups of 9 subjects each received the FLICS lessons and were compared with a control group of 8 similar children who were in a nursery school program. The results indicated that both experimental groups performed significantly better than the control group and that the FLICS program did benefit the migrant children in terms of their language performance. Also, the study supported the conclusion that a short-term language training program could bring about changes in language performance of culturally disadvantaged children. (DK)

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A LANGUAGE TRAINING PROGRAM FOR PRESCHOOL MIGRANT CHILDREN[1]

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This study reports on the effectiveness of the English Oral Language Lessons for pre-school migrant worker children. The major emphasis of the lessons was upon learning the structure of English sentences rather than on vocabulary. Two experimental groups received the FLICS' lessons and were compared with a control group of similar children who were in a nursery school program.

Results indicate clearly that both experimental groups performed better than the control group. The FLICS' English Language Program did benefit the migrant children in terms of their language performance when compared to children who attended a more traditional free play school program.

The results of this study support the conclusion that a short-term language training program can bring about changes in language performance of culturally disadvantaged children.

Every summer, Mexican migrant families come to the state of Michigan to pick the various crops in season. Because of the instability of the home life, poor housing, and low wages, these people fall into the category of what is currently called the "disadvantaged." Furthermore, because of their Mexican background, they are particularly deficient in their ability to speak English.

It has become increasingly obvious that disadvantaged children are in need of supplemental educational experiences in order that they may equal the achievements of their middle class peers. Recognition of this problem has served as a stimulus for the development of numerous pre-school intervention projects (Bereiter & Engelmann, 1966; Deutsch, 1965; Klaus & Gray, 1968; Weikart, 1967). Such programs, under the auspices of cognitively-oriented psychologists and educators, have, unlike traditional nursery schools, emphasized cognitive rather than social skills (Pines, 1967).

During the summer of 1968, the Foreign Language Innovative Curricula Studies (FLICS) of The University of Michigan carried out a pre-school and

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early elementary intervention project.[2] Children from about three to eight years of age (too young to work in the fields with their parents and older siblings) were given a structured program in Spanish, English, and general cognitive concepts. This study is an evaluation of the effectiveness of the English Oral Language Lessons for the pre-school children. The major emphasis of the lessons was upon the structure of English sentences rather than on vocabulary. The children were first given a small vocabulary, and then training in "plugging" these few words into the basic structures of the language. With this foundation, it was expected that they could increase their word usage. The lessons provided the children with the basic vocabulary by requiring them to label objects. At first, this labeling was allowed to be phrases, e.g., a car. Gradually, the children were called upon to label in complete sentences, e.g., It's a car. The children were then introduced to more complex structures and concepts e.g., That car is larger.; I'm pushing the car faster.; The car is on top of the box.

Since the major goal was to supply the children with proficiency in communicating in English, they were induced to verbalize the required phrases and sentences. Thus the teachers had to be especially careful to make sure that every member of the group responded. Each child was required to respond individually with the appropriate answer.

Thus, the major purpose of this study was to determine whether the FLICS' English Oral Lessons achieved the goal of enabling these children to understand and produce grammatical English sentences. The vast majority of these children were at such a low level of language ability in both Spanish and English that the realization of this goal would be a major accomplishment for a seven-week program.

Two groups of children, designated Experimental Group 1 (E1) and Experimental Group 2 (E2) received the FLICS' lessons and were compared to a group of similar children in a traditional, free-play nursery school program, the control group (CG). It was predicted that children in either experimental group would perform better than the CG children. E1 received three tests during the program as well as the final test which all groups received. It was predicted that E1 would thus perform better on the final test than E2.

Method

Subjects. The first experimental group (E1) was composed of nine subjects, four male and five female. Eight of these children were from one classroom, and one child was from another. (E attempted to obtain as many Ss as possible. Because of poor attendance in the one class, however, only one child was a suitable S.) Ages ranged from 48 mos. to 72 mos., $\bar{X}$ = 63 mos. Attendance at school ranged from 24 days to 30 days, $\bar{X}$ = 28.2 days.

The second experimental group (E2) was also composed of nine children, four male and five female. Five of these children were from one classroom, and four were from another. Ages ranged from 48 mos. to 72 mos., $\bar{X}$ = 58.8 mos. This mean age was calculated from eight of the nine children; no birth date could be obtained for one of the children although he and his brother said that he was five years old. Attendance ranged from 17 days to 30 days, $\bar{X}$ = 24.6 days.

The control group (CG) contained eight children, three male and five female. All eight Ss were from one classroom. Ages ranged from 48 mos. to 66 mos., $\bar{X}$ = 59.1 mos. This mean age was calculated from seven of the eight children. The child whose birth date was missing said, as did her brother and sister, that she was six years old. Attendance ranged from 11 days to 30 days, $\bar{X}$ = 22.1 days, of the 34-day program.

Tests. Three tests were constructed in order to assess the effectiveness of FLICS' English Language Lessons (See the Appendix). All of the questions were constructed from the FLICS' lesson material. The answers required were ones that had been specifically pointed out in FLICS' materials as sentences that were to be taught to the children in FLICS' lessons. The children, then, should have been able to produce and/or understand those sentences required in the answers.

The test questions were of two general types--productive and receptive. In the former, S was required to speak in English; in the latter, he was only to show that he understood what was spoken to him by carrying out an activity commanded by E.

There were 17 productive and five receptive items in the final version of the test, which was given to all three groups--E1, E2, and CG. This final version of the test was divided into three subtests, and one subtest was given to the Ss in E1 approximately every two weeks. The first subtest was made up of eight productive items and one receptive. The second subtest had five productive

and three receptive items. The third subtest was composed of five productive and one receptive items. This totals 23 items, one more than the final version, since the first question of the first and second subtest was the same.

Scoring of items. The receptive items were scored as correct when the correct behavior followed the command. The scoring of the productive items was more difficult. Frequently a response was partially correct. Errors could be classified into categories such as structural errors, those which violated rules of English syntax, and conceptual errors, those which indicated that the child did not comprehend the content of the question. It was decided that if the child made an error of any kind it would be scored as wrong. However, if the child did not respond, it was scored as an omission.

Procedure. Each S was tested individually by the E in a separate room. The same E tested all Ss in all three groups--E1, E2, and CG. S was told that they were going to play a game with some toys. He was then told that he was going to be asked some questions about the toys and that he should answer to the best of his ability. Responses were recorded on tape and later transcribed.

The Ss in E1 were given a test approximately every two weeks, for a total of three such tests. During the last week they received a final test which was composed of all the items of the previous three tests. The E2 and the CG groups received only the final test and were tested during the last week of classes.

Results

Tables 1 and 2 present the responses in both absolute number and percent for the three groups. For both receptive and productive items the results are as expected: Group E1 was correct more often and incorrect less often than Groups E2 or CG, and CG performed the poorest. Not only were the number of correct responses smallest and incorrect largest for CG, but the number of omissions was much larger for this group. Analyses of variance were performed to check for significance of these differences for both receptive and productive items, and these are summarized in Table 3. All F's were significant

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Insert Tables 1, 2, and 3 about here

Since the hypotheses predicted the order of differences between each pair of groups, t-tests were performed to test for these differences. Significance levels reported are for one-tailed tests.

E1 versus CG. Table 4 summarizes the results. For either category the hypothesis is supported: E1 showed clearly superior performance to CG, on all criteria.

Insert Table 4 about here

E2 versus CG. Table 5 summarizes the results. The differences were not as great, but for correct responses and omissions the differences are significant. However, since the two groups do not differ on number of wrong responses, the hypothesis is only partially supported.

Insert Table 5 about here

E1 versus E2. Table 6 summarizes the results. For correct and wrong responses, the differences were as expected: E1 performed better than E2. However, for omitted responses the differences were very small, and this finding is discussed below.

Insert Table 6 about here

Correlations between scores on receptive versus productive items were computed and are summarized in Table 7. The data indicate that the two categories represent two different response measures and thus maintaining the two categories was justified. Since the differences found for both measures were very nearly the same in terms of the predicted differences, the supporting evidence for the hypotheses is strengthened even further.

Insert Table 7 about here

Discussion

The results clearly supported the hypotheses: E1 performed better than CG; E2 performed better than CG; and E1 performed better than E2 on the criterion measures. Thus it seems that the FLICS' English Language Program did benefit the children in terms of their language performance when compared to children who attended a more traditional, free-play school program.

It is not clear just why E1 performed better than E2. E1 received three tests during the program, and thus these children had the opportunity to learn from their mistakes and utilize this knowledge on the final test. The correct answer was supplied when errors were made. It is also possible that the children in E1 became more test-wise and at ease in the testing situation and were less anxious at the final testing. A recent study by Zigler and Butterfield (1968) demonstrated that IQ test performance can be significantly improved under optimized testing conditions, so this alternative is reasonable. Obviously, these two interpretations are not mutually exclusive.

The findings on differences among groups in number of omitted responses offer further information. Children in the two experimental groups seldom failed to respond, whereas the omission rate was very high for the control group children. Thus the FLICS' Program did induce the children to verbalize and communicate in English, even though they might make an error. Further, since the two experimental groups were both equally likely to respond, the differences between them were more likely due to differences in language skills rather than other factors such as a tendency to not respond.

The results of this study support the conclusion that a short-term language training program can bring about changes in language performance in culturally disadvantaged children. Although the child was in school about seven hours per day, he received less than one-half hour of structured language instruction. Furthermore, mean attendance was only 28.2 days and 24.6 days for E1 and E2, respectively. The effects should obviously be more dramatic with an intensive program. One must be cautious, though, in claiming that generalized language improvement occurred. The teachers and E report that the children did make noticeable gains in language understanding and production in the classroom situation. Since they were so severely deficient at the beginning, such observations were not difficult to make. Further research should be directed at a systematic investigation of these generalized language gains. In addition follow-up data should be collected to assess if the language gains persist without continued intervention.

Footnotes

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[2]This project was supported by Title I funds, E.S.E.A., Public Law 89-750.

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Table 1

Raw Scores and Percentages for Each of the Criteria Within the Receptive Category for All Three Groups

		Correct	Wrong	Omission	Wrong + Omission
E1	Number of...	44	1	0	1
	Percent	.98	.02	.00	.02
E2	Number of...	33	10	2	12
	Percent	.73	.22	.05	.27
CG	Number of...	20	8	12	20
	Percent	.50	.20	.30	.50

Table 2

Raw Scores and Percentages for Each of the Criteria Within the Productive Category for All Three Groups

		Correct	Wrong	Omission	Wrong + Omission	?*
E1	Number of...	106	38	8	46	1
	Percent	.69	.25	.05	.30	.01
E2	Number of...	67	73	11	84	2
	Percent	.44	.47	.07	.54	.02
CG	Number of...	35	57	43	100	1
	Percent	.26	.42	.32	.74	.01

*Could not be categorized.

Table 3

Summary of F-Levels for the Analyses of Variance

Among the Three Groups--E1, E2, and CG

	Criteria			
	Correct	Wrong	Omission	Wrong + Omission
	F-Level	F-Level	F-Level	F-Level
Receptive	8.64**	3.47*	4.26*	8.48**
Productive	9.06**	3.74*	3.53*	8.98**

* $p < .05$

** $p < .01$

Table 4

Summary of Comparisons (One-Tailed t-Tests)

Between E1 and CG

	Criteria							
	Correct		Wrong		Omission		Wrong + Omission	
	t	Signif. Level	t	Signif. Level	t	Signif. Level	t	Signif. Level
Receptive	4.12	.001	2.97	.005	2.11	.05	4.12	.001
Productive	3.75	.001	1.59	.10	1.89	.05	3.77	.001

Table 5

Summary of Comparisons (One-Tailed t-Tests)

Between E2 and CG

	Criteria							
	Correct		Wrong		Omission		Wrong + Omission	
	t	Signif. Level	t	Signif. Level	t	Signif. Level	t	Signif. Level
Receptive	1.54	.10	-0.31	N.S.	1.75	.05	1.58	.10
Productive	1.78	.05	-0.62	N.S.	1.76	.05	1.76	.05

Table 6

Summary of Comparisons (One-Tailed t-Tests)

Between E1 and E2

	Criteria							
	Correct		Wrong		Omission		Wrong + Omission	
	t	Signif. Level	t	Signif. Level	t	Signif. Level	t	Signif. Level
Receptive	2.54	.025	2.17	.025	1.57	.10	2.65	.01
Productive	2.35	.025	2.98	.005	0.34	N.S.	2.35	.025

Table 7

Correlations Between Number Correct on Receptive and Productive Items and Correlations Between Number Wrong on Receptive and Productive Items

	Criteria	
	Correct	Wrong
Groups		
E1	-.225	-.188
E2	.655	0.00
CG	.676	.449

APPENDIX

SUBTEST 1

1. What's this? (Pointing to a car)
2. (Holding a truck) Is this a truck? Yes,....
3. (Holding a doll) Is this a block? No,....
4.* (Placing a doll and truck before S) Which one is not a doll?
5. (Showing S a big and little car, setting forth the big car and pointing to it) Is that car big? Yes, that....
6. (Showing S two big blocks and two small blocks, setting forth the two big blocks and pointing to them) Are those blocks big? Yes, those....
7. (Showing S two big blocks and two small blocks again, setting forth the two small blocks and pointing to them) Are those blocks big? No, they're....
8. (Showing S a big and little block, setting forth the little block and pointing to it) Is that block little? Yes, that is....
9. (Showing S four or five big blocks and pointing to all of them) Are all of those blocks big? Yes, all....

SUBTEST 2

1. What's this? (Pointing to a car)
2. (E pushes the car) What am I doing? I'm....
3. (E pushes the car fast) I'm pushing the car fast.
   (E pushes the car slowly) Now, what am I doing? I'm....
4.* (E gives the car to S) Now, you pull the car? Pull the car.
5. (E places S's hand on a block) What are you doing?
6. (E shakes S's hand and/or tells him, Shake your hand. or Do this. while shaking his own hand) What are you doing?
7.* Now, touch your head.
8.* Now, stand and walk to the door.

* Receptive item.

SUBTEST 3

1. (Pointing to a cardboard box) What's this?
2. Walk around the box.
3.* (Putting a car on the box and pointing to it) Where is the car? It's....
4. (Putting the car in the box and pointing to it) Now, where is the car?
5. (Taking the car out of the box) What am I doing? I'm....
6. (E puts his hand down to the floor) My hand is down. (E now puts his hand up) Now, where is my hand?